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The major purpose of this study was to determine if teachers and/or caregivers respond differentially to the disruptive and dependent behaviors of children as a function of the sex of the child involved. A second purpose was to describe the teachers' reactions to boys and girls who were participating appropriately in ongoing activities. Teacher reaction to three classes of child behavior--disruptive, dependent, and participation--was observed with the expectation that younger children would exhibit more dependent behaviors than older children. Boys were expected to exhibit greater frequency of disruptive behavior than girls, but girls were expected to exhibit a greater frequency of dependent behaviors than boys. At the same time, teachers were expected to respond to disruptive behaviors of boys more than girls. Teachers were also expected to reinforce girls for dependent behaviors more often than boys. The study was conducted in two schools and no differences between schools were expected.

The subjects were 57 children and their teachers in preschool classes at the Demonstration Nursery of the University of North Carolina at Greensboro and at the Child Development Laboratory of A & T State University.

The data were collected by trained observers using an observational technique based on a time-series design. An adaptation of the Serbin, O'Leary, Kent, and Tonick (1973) observational schedule was used.

For the analysis of child behaviors, a multivariate analysis of variance was used. In the inspection of the data, it was found that the two schools were not matched for the ages of the children. To eliminate the influence of this difference, age was included in the analysis as a covariate.

Hypothesis I, that there would be no difference between the frequency of disruptive, dependent, and participatory behaviors of children at the two schools was rejected. There was a significant difference between the two schools ($p < .007$). The significant univariate F's were ignoring and crying. Hypothesis II, that younger children would exhibit more dependent behaviors than older children was supported ($p < .006$). The significant univariate F's were crying and participation. Hypothesis III, that boys would exhibit greater frequency of disruptive behavior and girls would exhibit a greater frequency of dependent behavior was rejected, but the results are suggestive of a need for more research ($p < .07$). Hypothesis IV, that teachers would respond to disruptive behaviors of boys more than girls and would reinforce girls for dependent behavior more than boys was rejected. There was a difference in how teachers responded to dependent behaviors, but it was not in the expected direction. There was no significant difference in how teachers responded to disruptive behaviors of boys and girls.

A COMPARISON OF TEACHER RESPONSE TO THE PREACADEMIC AND PROBLEM BEHAVIOR OF BOYS AND GIRLS

by

Donna Helen Wolfe

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CHAPTER I

INTRODUCTION

It is fairly well established that girls and boys exhibit differences in personality and in psychological and behavioral traits prior to school age (Goodenough, 1957). However, the origin of these differences is a topic of current discussion. Physical and biological differences may partially account for sex differences in some characteristics such as aggression and activity level; other traits though, may be related to a process of sex role identification in early childhood.

Much of the research in the area of sex role development has emphasized the influence of the home and family as the important centers of this development. The influence of the educational setting on the development of sex roles in children has recently become a topic for research. This is a timely topic as there is a growing acceptance of day care programs for infants and toddlers. The investigation of how such programs influence the social development of our children through teacher-child interaction is one aspect of day care programs which needs research. The teacher's role in shaping behavior with regard to stereotypical sex roles has also recently become a topic for

research.

One of the most timely aspects of child development is that of sex role. The women's liberation movement questions traditional roles. However, before roles can be adequately changed, it would appear that more knowledge concerning the origin of sex role differences between males and females would be useful.

The origin of psychological and behavioral differences between males and females is a topic of current discussion. Physical and biological differences may partially account for sex differences in characteristics such as aggression and activity level (Serbin, O'Leary, Kent, & Tonick, 1973). However, the differences in other traits, including cognitive abilities such as analytical and spatial reasoning, may be related to a process of sex role identification in early childhood (Serbin, O'Leary, Kent, & Tonick, 1973).

The present study aimed to increase the knowledge in the area of development of sex differences. Information about teacher-child interaction patterns and their relation to sex differences, such as intellectual functioning has been sparse.

Statement of the Problem

The major purpose of the study was to determine if teachers and/or caregivers respond differentially to the disruptive and dependent behaviors of children as a function of the sex of the child involved. A second

purpose was to describe the teachers' reactions to boys and girls who were participating appropriately in ongoing activities (Serbin, O'Leary, Kent, & Tonick, 1973).

Definitions

The child behaviors observed were classified into three categories: disruptive, dependent, and appropriate to ongoing activities. Disruptive behaviors to be observed included ignoring, destruction, and aggression. Dependent behaviors observed included crying, proximity, and solicitation. In addition, the behavior of a child appropriately participating in the ongoing class activity was recorded. The definitions of these behaviors are found in Appendix A.

Teacher responses to each specific child behavior were classified as follows: (a) punishing behaviors which included soft reprimand, loud reprimand, and restraint; (b) rewarding or accepting behaviors which included praise, touching, hugging, brief conversation, extended conversation, brief direction, extended direction, helping, taking away, and no response. These behaviors are defined in Appendix B.

Hypotheses

Teacher reaction to three classes of child behavior--disruptive, dependent, and participation--was observed with the expectation that younger children were expected to exhibit more dependent behaviors than older children. Boys were expected to exhibit greater frequency of disruptive behaviors than girls, but girls were expected to

exhibit a greater frequency of dependent behaviors than boys. At the same time, teachers were expected to respond to disruptive behaviors of boys more than girls. Teachers were also expected to reinforce girls for dependent behaviors more often than boys. The study was conducted in two schools and no differences between schools were expected.

Limitations

The study was conducted with preschoolers at the Demonstration Nursery of the University of North Carolina at Greensboro and at the Child Development Laboratory of A & T State University. Because of the characteristics of subjects, certain limitations were therefore relative to this study: (a) the subjects in the sample were not randomly selected because in some cases entire classes were observed; (b) subjects were between 12 months and 76 months; and (c) the observation period was limited to three weeks.

CHAPTER II

REVIEW OF LITERATURE

Most children in any culture display behaviors which are considered appropriate to the gender in which they were classified at birth. The process underlying this development of sex-appropriate behaviors has been referred to as sex role identification. The term sex role identification has been used in varying ways by social scientists and thus needs clarification prior to any discussion of it or its derivatives as concepts. Lynn stated:

> In child development the concern is primarily with identification defined as either the child's similarity to his parents or to individuals within a given sex category (1969, p. 5).

According to Mussen:

> Sex-typing refers to the process by which the individual develops the attributes (behavior, personality characteristics, emotional responses, attitudes, and beliefs) defined as appropriate for his sex in his own culture (Goslin, 1969, p. 708).

The emphasis on the acquisition and eventual performance of sex-typed behavior patterns is a main facet of the concept of identification. The first years of life are of crucial importance for sex-role development. The process through which a child learns the characteristics of male and female

has been the subject of much debate. Numerous studies have been conducted, and various theories devised to account for the development of sex-typed behaviors in children. This review of literature will focus on a review of Freudian theory, followed by a review of social learning theory, and a review of Kohlberg's cognitive developmental theory. This will be followed by a discussion of parental and then teacher influences on sex role acquisition.

Freudian Theory

Freud's views on identification appear to dominate the literature, and a review of them would be a pertinent starting point. Freud's concept of identification was based on " 'an emotional tie with an object'--typically the parent" (Bronfenbrenner, 1960, p. 16).

Freud posited three phases in the development of identification in the child. The first phase is the preliminary form, during early childhood, when "ego and object are fused in a single undifferentiated pattern" (Bronfenbrenner, 1960, p. 17). Object choice, the second phase, involves attachment of the libido to a person, usually the parent. The third phase is the establishment of identification of the ego with the abandoned object.

In the case of the boy, the phallic period preceeds and perhaps overlaps the development of the Oedipus complex. This is the time when he is supposedly narcissistically

attached to his penis. Sometime between the ages of three and seven, his libidinal cathexis is toward his mother. The fixation on his penis and love of his mother create a conflict in the boy because he sees the father as a rival. His fear of castration by the father leads to the dissolution of the Oedipus complex, and results in his identification with the perceived punitive and aggressive father. This type of identification is called aggressive or defensive identification, as it is a function of the fear the child has of the aggressor (the father). Another critical factor is the discovery that girls have no penis which leads the male to believe that the threat of castration is real and can happen.

The girl's dissolution of the Oedipus complex was thought by Freud to be more complex than the boy's; the main difference being that she must transfer her love object from the mother to the father. The female, at first, identifies with her mother, this attachment based on the loving, caring dependency relationship between mother and child. However, when the female realizes that her mother was responsible for bringing her into the world without a penis, she transfers her love to the father who possesses the desired penis. The girl is thought to have a penis envy period similar to the boy's phallic period. In the resolution of the Oedipus complex Freud stated: "The girl's libido then

slips into a new position, one in which she gives up her wish for a child, thus taking her father as a love object. . ." (1948, p. 88). "At about six years old the girl, as well as the boy, realized that a desire for a parent of the opposite sex is impossible to gratify" (Rosenberg & Sutton-Smith, p. 43, 1972). The girl then identifies again with the mother. This type of identification was called anaclitic identification by Freud, and was assumed to be based on the fear of the loss of mother love.

Freud believed that by identifying with the same-sex parent the child would begin to acquire some of that parent's behavioral characteristics and personality attributes. This would result in the acquisition of sex-typed behavior and characteristics. For females, this identification causes passivity and receptivity. A weaker super-ego is supposedly the result of the difficult Oedipus complex resolution for females and is essential to the characteristic differences between them and their male counterparts.

Some theorists have denied Freud's theories as not scientifically verifiable, while others have modified them. Mowrer (1950) described identification as a consequence of the child's anxiety due to discipline implemented by the loved parent, upon whom the child is dependent. This led to Mowrer's development of a secondary reinforcement theory which suggests that the parent becomes a secondary reinforcer

for the child. Since the model is the mediator of the child's biological and social rewards, his attributes are paired repeatedly with the positive reinforcers and consequently take on secondary reward value. Then by stimulus generalization, responses which match those of the model attain reinforcing value for the child. Mowrer equates this occurrence in psychoanalytic terms to conscience development.

Mowrer further modified Freud's theory of object choice by suggesting that identification occurs first and object choice follows. Mowrer considered this an undifferentiated identification since at this point the infant would see the mother as a human being, no different from other adults in the surroundings. Consequently, the boy identifies with the father when he has developed in age enough to discriminate between the sexes, also at a time when the father is more instrumental in his life for the process of his sex role identification. The shift to father identification is based on affection and love for the father. This usually occurs at the age of three or four, when

> The good father tends to take his son on, to accept responsibility for him in a way that he does not do for his little girls. The boy becomes 'my boy, my son'; the father permits the child to accompany him in his work, if possible, and otherwise creates special opportunities for excursions and experiences which the mother could not well provide. The father, in other words, begins to open up for the child a glimpse into the man's world (Mowrer, 1959, p. 610).

Talcott Parsons (1955) departed from Freud's theory of identification in that he placed more emphasis on the importance of social influences on sex-role development. Parsons placed primary responsibility for socialization as well as sex-role development on the influence within the family.

Bronfenbrenner (1960) believes Parsons' theories of the antecedents of identification to be a restatement of Freud's anaclitic identification. However, he pointed out Parsons' divergence from Freud on three major issues:

> First, Parsons criticizes Freud for failing to recognize that identification results in the internalization, not only of moral standards (the superego), but also the cognitive and expressive features of the parent and through him, of the culture as a whole(1960, p. 29). Second, Parsons interpreted Freud's notion of the "bi-sexuality" of the child to be "constitutionally given", to be void of the learning processes as a causal factor, one which he strongly supported. Parsons' third criticism was that Freud did not provide a "systematic structure of social relationships in which the process of socialization takes place (p. 31).

The father role, relative to the others in the system, is high on power and instrumentality, low on expressiveness. The mother role is high in power and expressiveness, low on instrumentality. By "instrumental", Parsons was referring to the link with external roles (such as outside jobs). "Expressive" referred to the warm, nurturant qualities associated with the mother. According to Parsons, these roles function as means for differentiation of the sex of the parents by the child.

Parsons (1955) criticized Freud for failing to note the consequences of the total social system on the sex-role identity of the child. He saw the father as more than a punitive and feared figure, but also as an executive figure which the developing child wishes to emulate.

Parsons viewed personality and sex-role development as evolving in three phases. The first phase is the oral dependent phase, during which the child forms attachment to one or a class of objects--of which the mother is the model; gratification of the ego is dependent on these objects. The second phase is the anal phase, during which the child develops increased autonomy in interactions with the mother. He differentiates himself from his mother and begins to learn roles and gain general knowledge about the functions of the social system.

The third phase, which comes about as a resolution of the Oedipus complex, is important in the child's development, as he establishes himself as a member in the basic social system of the family. During this period the mother relinquishes the instrumental role that she has played for the child, and the father adopts the instrumental role as disciplinarian; internalization of the sex role for the child occurs, and autonomy is delineated in relation to parents and siblings.

Social Learning Theory

Social learning theory is based on both psychoanalytic and stimulus-response theory. Like their Freudian predecessors, social learning theorists agree that the early dependence of the infant on the mother is an important variable. They, however, acknowledge the child's anxiety in the mother's absence and recognize, through this association, that the mother's behavior takes on reinforcing properties for the child.

Those behaviors for which the child receives positive reinforcement will increase, while those which are punished will decrease in frequency. However this theory does not suggest that every response must be rewarded, but that generalization accounts for learning of new behaviors which have not been previously reinforced.

"In social learning theory, sex typed behaviors may be defined as behaviors that typically elicit different rewards for one sex than for the other" (Mischel, 1966, p. 56). Children learn the social behavior appropriate to their own sex without any specific teaching from their parents. According to Sears, Maccoby, and Levin (1957), three kinds of learning occur in connection with social and emotional behavior. These are learning by trial and error, learning by direct tuition, and learning through role practice. Role practice is defined as "the discovery and learning of new

actions by observing what others do, and then practicing it by pretending to be the other person" (Sears, Maccoby, & Levin, p. 369). The three experimenters hypothesized that children would be likely to engage in role practice if parental actions had been "nurturant, supportive, accepting" (p. 370).

The three experimenters are in agreement with other social learning theorists in their view of the child identifying with the main caretaker, who in American culture is generally a woman. For girls this is acceptable, as throughout life it will be appropriate for her to possess feminine personality traits; however, the boy must shift to a masculine identification sometime in the early years. The male child will make this shift as he is reinforced by both his parents and peers for behaving according to their expectations for male behavior.

Sears, Maccoby, and Levin (1957) interviewed 379 mothers whose children were enrolled in public school kindergartens. The results of their study showed that when handling aggressive behavior girls' mothers were much less permissive than boys' mothers were, and less strongly encouraged their female children to fight back when they were attacked. A larger percentage of boys were given high freedom of expression of aggression toward the parents. Sears, Maccoby, and Levin found that boys received more frequent physical punishment, while girls were treated

with withdrawals of love as a punitive technique.

The social learning theorist proposes that the greater incidence of dependence behavior in girls and aggressive behavior in boys can be explained by the reward contingencies operating in our culture. Bandura and Walters (1963) have concluded that aggression is much more tolerated in boys than it is in girls.

The process of sex-role development is encouraged when parents supply daughters with play materials which foster imitative adult role behavior. These toys include such things as dolls, kitchen utensils, and other household equipment. According to Bandura and Walters (1963), the play equipment of boys is less sex-role related, due to the rather abstract nature of the traditional male occupational role. Bandura and Walters (1963) defined role-playing as a "process whereby, through imitating adult activities, the child gains mastery of behavior patterns that he will be expected to display as an adult" (p. 90).

According to Mischel, the acquisition of sex-typed behavior occurs through a learning process of observation. He stated that the terms "identification" and "imitation" refer to the same thing: "the tendency for a person to reproduce the actions, attitudes, and emotional responses exhibited by real-life or symbolic models" (Maccoby, 1966, p. 57).

Learning through observation can occur without any direct reinforcement to the learner. Observational learning is facilitated by a nurturant relationship between the observer and the model, and by the consequences of the model's behavior. "If a child observes a model displaying a behavior successfully he will more likely act with the same behavior than if the model's behavior led to negative consequences" (Maccoby, 1966, p. 57).

Thus, according to Mischel, the young child comes to recognize his sexual identity through observational processes. By the time a child is four, he is aware of the concepts of male and female, and of his own sexual identity.

Kohlberg's Cognitive Developmental Theory

Kohlberg's cognitive developmental analysis of children's sex role concepts assumes "that basic sexual attitudes are not patterned directly by either biological instincts or arbitrary cultural norms, but by the child's cognitive organization of his social world along sex-role dimensions" (Maccoby, 1966, p. 82). Kohlberg related his theory to Piaget's theory of cognitive development. Kohlberg stressed the child's organizing role of perceptions as vital in his conceptions of his body and his world.

Kohlberg (1966) suggested that young children's sex-role attitudes have universal aspects which change radically with age. He related these changes to changes resulting

from trends of cognitive-social development rather than from Freud's view of biological change or of bodily instinct. He viewed the child's sex-role concepts as "result of child's active structuring of his own experience; they are not passive products of social training" (Maccoby, 1966, p. 85).

Kohlberg supported his cognitive developmental analysis with evidence of the development of basic and universal conceptions of gender role in children between three and seven years of age. He stated three areas of universality:

1) development of constant gender categories
2) development of awareness of genital differences
3) development of diffuse masculine-feminine stereotypes based largely on the connotations of non-genital body imagery (Maccoby, 1966, p. 107).

Research Related to Sex Roles

The social teaching of sex roles is begun by parents when their child is an infant. Even before a baby is born and certainly after, parents respond to a child in a sex-differential fashion. Lewis (1972), in his observations of parents' behavior toward their infants, noted that girl infants were looked at and talked to more than boy infants. Girls were the recipients of more distal behaviors which Lewis defined as "looking at, smiling, and vocalizing to: behaviors which can be performed at a distance" (1972, p. 234).

Boy infants received more proximal behaviors which were those that had to do with "touching, holding and rocking: behaviors which involve physical contact" (1972, p. 233). Lewis observed that boys received more proximal behaviors than girls for the first few months of life, but by six months of age a change had occurred, and girls received more proximal behavior than boys until the age of one and one-half to two years.

These differential behaviors by mothers toward their infants may have a relation to behavioral differences exhibited by the thirteen-month old infants themselves (Goldberg & Lewis, 1969). This study of thirteen-month old infants revealed that girls were more dependent and less exploratory in their play behavior. These behavioral differences appeared to be related to the mothers' differential responses to boys and girls in the first six months of life. The general results indicated that mothers behave differently toward their infants as a function of their sex, and reinforce sex-appropriate behaviors even in infancy.

Rothbart and Maccoby (1966) investigated parents' behavior toward a child as a function of (a) sex of the parent and (b) sex of the child. They studied parents' reactions to specific behaviors of children, including dependency and aggression that are regarded as sex-typed. The authors hypothesized that both parents would consistently reinforce dependence behaviors for females and physically aggressive behaviors for males.

The parents were placed in a hypothetical situation with a child. This was done by using a tape-recorded script of a four-year old child's voice whose sex was not readily identifiable. One group of parents was told that they were hearing a boy's voice while the other group was told that they were hearing a girl's voice. They were asked to indicate their reactions to the recording as they would if their own sons or daughters had made the statements recorded. The differences in the responses were then examined. A general trend emerged with fathers generally showing greater permissiveness towards girls than boys for both dependency and aggression, while mothers tended to be more permissive with boys than girls. Another significant effect was that fathers allowed more autonomy than mothers.

These parents were also administered questionnaires asking them about differences they felt actually existed between boys and girls on such behaviors as their relative degree of obedience. The parents' opinions about the actual frequency of sex differences correlated significantly with their self-reported attitudes about the differences that should exist between boys and girls. Rothbart and Maccoby concluded with the following statement:

> Rather than consistent reinforcements of sex-typed behavior by both parents, inconsistency between parents seems to be the rule, and while a parent may treat his child in a manner consistent with the cultural stereotype in one area of behavior, in another he may not (1966, p. 242).

A study by Fauls and Smith (1956) indicated that children learn that their parents expect boys and girls to behave differently from a rather early age. They showed five-year olds a series of paired pictures depicting a sex-appropriate and sex-inappropriate activity. They asked the children which activity their mothers would want the boy to do and which she would want the girl to do. The results showed that children of both sexes indicated that the mothers preferred the activities appropriate to the child's sex more often than sex-inappropriate activities.

Teacher's Influences on Sex Role Development

The social learning of sex roles is started by parents at home with their child as an infant. Once a child is old enough to participate in pre-school activities other factors begin to influence his sex-role development. The teacher's role in shaping behavior with regard to stereotyped role ideals is currently being researched. Much research has indicated that parents have a different behavioral expectation schedule for girls and boys, and therefore support sex-related behavior differences. Generally teachers show sex-related differences in behavior expectations.

Fagot and Patterson (1961) tested the hypothesis that rewards are distributed by models, contingent on sex-appropriate behavior. They observed three-year old boys and girls in a free-play situation in a nursery school with female teachers. They predicted that the teachers would reinforce feminine behaviors more than masculine behaviors regardless of the child's sex. Teachers reinforced boys 199 out of 232 times for feminine behavior and reinforced girls 353 out of 363 times for feminine behavior. However, the boys did not become more feminine. The explanation for this was that boys reinforced boys for appropriate behaviors 359 times and girls only 71 times. Girls reinforced girls for feminine behavior 463 times and boys 63 times. The conclusion was that peer group interaction can expedite the process of appropriate sex-role behavior adoption, even if the same-sex parent is absent from the home.

Sears and Feldman (1966) cite a study by Spaulding which used fourth and sixth-grade classrooms with thirteen men and eight women teachers. Spaulding found that teachers interacted more with boys on four major categories of teaching behavior which were approval, instructing, listening to the child, and disapproval. Spaulding devised seven categories for disapproval of behavior: violation of rules, personal qualities of the child, thoughtlessness, tool mechanics, lack of knowledge or skill, lack of attention,

and poor housekeeping. He found that lack of attention was the most significant cause for disapproval in both boys and girls and accounted for 40% of teacher disapproval. For girls, lack of knowledge or skill accounted for 40%, and violation of rule accounted for 9%. For boys, lack of knowledge or skill accounted for 26% of the disapproval, and violation of rules accounted for 17%. Spaulding noted that the tone of voice used with boys was harsh.

Joffe (1971) emphasized the importance of the family and school in sex role socialization. Joffe discussed the experiences of children with respect to sex role socialization in the nursery school. The purposes of her research were to show what school demands from children in terms of sex appropriate behavior and how the children themselves conceived of their sex role obligations. Through a participant-observation method, Joffe observed children from three and one-half to four and one-half years old. Socioeconomic status ranged from professionals and students to lower income families. Joffe concluded that the influence of teachers on sex role is determined by the "tolerance shown by the teacher to children whose behavior showed varying degrees of sex identity 'confusion', e.g., those children who with regularity would dress as members of the opposite sex and assume the 'wrong' sexual identity in games of 'house' " (Joffe, 1971, p. 469). Joffe emphasized that

we need to examine schools who tolerate this "confusion" and those which do not tolerate it and attempt to determine the role actually played by the school itself in the transmission of sexual stereotypes.

Levitin and Chananie studied the "responses of forty female primary school teachers to descriptions of aggressive or dependent behaviors attributed to hypothetical male or female students" (1972, p. 1309). The purpose of this study was to determine whether or not primary school teachers evaluate young children in terms of sex-typed behaviors and encourage traditional sex-typed behaviors. The results showed that "teachers clearly preferred dependent to aggressive behavior, regardless of the sex of the hypothetical child. The teachers clearly preferred the dependent girl to the other sex/behavior pairings; they showed significantly more liking for the dependent girl. Achieving girls were also significantly more liked than achieving boys" (1972, p. 1315).

Biber, Miller, and Dyer (1972) in their observation of pre-school classes showed that teachers contacted girls for instructional purposes significantly more often than they contacted boys. Girls received significantly more reinforcement for instruction although the amount of reinforcement per instructional unit was not different between boys and girls.

Serbin, O'Leary, Kent, and Tonick (1973) tested the hypothesis that teachers respond differentially to the disruptive and dependent behaviors of children as a function of their sex. The results showed that teachers were more likely to react to aggressive behaviors by boys and to use a loud reprimand with boys rather than girls. In response to dependent behaviors, teachers gave increased attention to girls when they were proximal, which they did not do for boys. Sex differences were found in the instructional forms of teacher attention. Boys received more brief directions, more extended conversation, and twice as much extended direction as girls. There were no differences in the behaviors involving touching, helping the child, and brief conversation.

The results of these studies suggest some potential factors in the development of sex differences in cognitive and social development. Serbin, O'Leary, Kent, and Tonick suggested that the "existence of differences in this sort of training given to boys and girls might well be partially responsible for the sex differences in analytic and spatial reasoning ability reported in primary grades and beyond" (1973, p. 803).

Summary

There is a lack of information regarding the specific ways in which schools foster socialization into sex roles. How teachers respond to, teach, and encourage sex-typed behaviors is not clear. A gap exists in this area especially in the preschool age group. As the preschool years appear to be the time during which the basis of sex role development is begun we need to know more about what is happening to children at this time. Serbin, O'Leary, Kent, and Tonick (1973) provided some of the first data which relate directly to the preschool teachers' actual reactions to behaviors of children with relation to sex-role development. The present study aimed to further increase the knowledge they provided by utilizing a sample including younger children and a different method.

CHAPTER III
METHODOLOGY

The method used in this study was an observational technique based on a time-series design. Observers were trained to observe and record teacher-child interaction using a behavioral code (see Appendices A and B). Teachers were observed for their rewarding or punishing responses to disruptive, dependent or appropriate behavior of their preschool children. Data were compared between sexes and between schools of the children.

Subjects

The subjects were 57 children and their teachers who were enrolled in preschool classes at the Demonstration Nursery of the University of North Carolina at Greensboro and at the Child Development Laboratory of A & T State University.

The five preschool classes which were observed at the Demonstration Nursery met daily from 8:00 a.m. to 5:30 p.m. The teachers were all female; two were white and three were black. The age range within each class was as follows:

Class I	12 months to 17 months
Class II	18 months to 23 months
Class III	24 months to 35 months
Class IV	3 year olds
Class V	4 year olds

Thirty-five children were enrolled at the Demonstration Nursery, 21 males and 14 females. Twenty per cent of the children enrolled were black.

The three preschool classes at A & T State University Child Development Laboratory met daily from 8:00 a.m. to 5:30 p.m. The teachers were all female: two were black and one was white. The age range within each class was as follows:

Class VI	24 months to 35 months
Class VII	36 months to 47 months
Class VIII	48 months to 66 months

Thirty-nine children were enrolled in the program, 17 males and 22 females. Ninety-five per cent of the children were black.

The children from all eight classrooms were categorized into two age groups, (a) 12 to 36 months, and (b) 37 to 66 months. Within each group the number of children observed from each school was as follows:

Table 1

Ages of Children

UNC-G Demonstration Nursery

12 months - 36 months	37 months - 66 months
7 males	9 males
6 females	7 females

A & T Child Development Laboratory

12 months - 36 months	37 months - 66 months
7 males	8 males
5 females	8 females

The median age of boys at the A & T Child Development Laboratory was 46.5 months. The median age of girls at the Child Development Laboratory was 51.1 months.

The median age for boys at the Demonstration Nursery was 34.8 months. The median age for girls at the Demonstration Nursery was 38.0 months.

Observers

The researcher trained one graduate student to help her with recording child and teacher behavior through the use of an observational schedule. The training sessions were held at the UNC-G Demonstration Nursery for one week prior to the beginning of data collection. The observer reliability coefficient was .96 for child behavior categories during the pre-observation training period. The reliability coefficient was .82 for teacher behavior categories in the pre-observation training period. The reliability coefficient was calculated by dividing the number of agreements for a specific behavior category by the number of agreements plus disagreements for that same category.

Procedure

The 57 children to be observed were randomly selected from the 74 children prior to the first day of data collection. This was done by using a table of random numbers.

The observation period lasted for three weeks, beginning on April 15 and ending on May 3, 1974. Each child was observed two times per day in observation periods of two minutes. In each minute, the observer watched for 20

seconds and recorded the following 10 seconds. This allowed 40 seconds of observation per minute. As the observation period was two minutes there was 80 seconds of observation per observation period or 80 X 2 = 160 seconds per child per day. This equalled 40 minutes of observation per child for the three week period or for the total of 57 children, there were 38 hours of observation.

The observer recorded the behavior of one child at a time, looking for those behaviors listed on the observational schedule. If one of these behaviors was observed, the observer checked the appropriate box. If the teacher responded to the child's behavior with one of those behaviors listed, then the observer noted this by recording the abbreviation for this behavior in the lower portion of the box. If no teacher response occurred to the child behavior, then no response (NR) was recorded.

Observations were made during regular classroom activities, both structured and unstructured, such as free play, group time, lunch, and story time.

The two observers observed teacher-child interaction using a behavioral code provided for this study (see Appendices A and B, used by permission of Lisa Serbin and The Society for Research in Child Development). Disruptive behaviors observed were ignoring, destruction, and aggression. Dependent behaviors observed were crying, proximity, and solicitation. In addition, the behavior of a child

appropriately participating in the ongoing class activity was recorded. Teacher responses to each specific child behavior were as follows: punishing behaviors included soft reprimand, loud reprimand, and restraint. Rewarding or accepting behaviors included praise, touching, hugging, brief conversation, extended conversation, brief direction, extended direction, helping, taking away, and no response. An observation schedule was used for recording behavior (see Appendix C).

At the end of the data collection period, reliability was again obtained by having the two observers simultaneously record the behavior of each child at the A & T Child Development Laboratory for a three day period. The measure of reliability utilized was number of agreements in coding the occurrence divided by the number of agreements plus disagreements for each behavioral category. The observer reliability coefficient was .85 for teacher behavior and .91 for child behavior.

To avoid potential biases in data collection, the teachers were not informed of hypotheses or predictions. Observers were aware of the nature of the study. It was believed that if reliability was established at a high enough level prior to beginning data collection, there would be no adverse effects of observer knowledge of hypotheses.

CHAPTER IV

RESULTS AND DISCUSSION

Preschool boys and girls and their teachers were observed for teacher responses to student behaviors in two different schools. Seven child behaviors were analyzed for sex and school effect by using a multivariate analysis of variance. Other analyses were made to further refine the relationship between age and behavior and the correlation among the behaviors themselves. Selected teacher responses (including a no response category) were analyzed for their relationship to broad categories of student behaviors: disruptive, dependent, and participatory.

The major finding for child behavior was that the behavior of ignoring was carried out significantly more by boys than by girls. However, the excess of ignoring behavior is the result of only the males in one school. When schools were compared, one school had significantly more ignoring behavior and the other school had significantly more crying behavior. When all boys and all girls were compared, there were no significant differences among the seven behaviors.

The major findings for teacher responses were that there were no significant differences among the teacher responses to the children's disruptive behavior. Teachers did, however respond significantly more in touching and brief

conversation for dependent behaviors of males.

Analysis of Child Behaviors

For the analysis of seven child behaviors, a multivariate analysis of variance (MANOVA) was chosen. Bock and Haggard (Whitla, 1968) pointed out that where several dependent variables have been obtained on the same subject and are correlated in some unknown way "no exact probability that at least one of them will exceed some critical level on the null hypothesis can be calculated" (p. 102). When running multiple tests with a set of variables which are correlated, it is very difficult to determine how many significant results would be obtained by sheer chance; however, MANOVA takes into account all dependent variables and their correlations simultaneously and yields an F-ratio which constitutes an overall test of whether there are non-chance relationships in the data.

In the inspection of the data, it was found that the two schools were not matched for the ages of the children. The boys' and girls' mean ages at A & T Child Development Laboratory were 46.5 and 51.1 months, respectively. At the UNC-G Demonstration Nursery, the mean ages were 34.8 and 38.0 for boys and girls, respectively. To eliminate the influence of this difference, age was included in the analysis as a covariate. The results of the MANOVA are best interpreted as to what would be true if the children had not varied in age.

The computer program used yields two usable sets of outputs. One set presents the univariate F's, that is, what the results are for each variable singly. Given an overall significant F in the MANOVA, the means and the univariate F's were inspected to determine which variables differ between groups in the variables' actual, raw, or "natural" form in the data. A second set of output yields a set of discriminant function weights for each effect tested.

Lacking prior hypotheses such weights may be difficult to interpret in a psychologically meaningful fashion. The weight for any one variable actually reflects what its relationship to the factor would be with the other variables controlled. Having a number of variables and lacking predictions as to causal sequences, that is, which variable should predict group membership or not predict it if another variable is controlled, such weights are very difficult to interpret.

As a step in controlling for the covariate, age, the regression of the dependent variables on age was tested. The overall F, taking in the fact that seven variables were being tested, was significant. Table 2 shows the regression coefficients of each variable on age and their univariate significance. It can be seen that two behaviors, crying and participation, were significantly related to age. The former decreasing as age increases, and the latter increasing with increasing age.

Table 2

Relation of Behavior to Age

Variable	Regression coefficient	*F*	*p* less than
Ignoring	-.003	1.7	ns
Destruction	-.002	2.2	ns
Aggression	.002	.59	ns
Crying	-.013	19.9	.001
Proximity	-.003	.27	ns
Solicitation	.005	1.8	ns
Participation	.015	6.5	.01

*All univariate *F*'s in the study have 1 and 53 degrees of freedom

Multivariate *F* = 3.33, $p < .006$, all multivariate *F*'s have 7 and 47 degrees of freedom

Table 3 shows the correlations between all pairs of dependent variables. The table reveals some intercorrelation between a number of the behaviors. The negative correlations of destruction and crying with participation ($p < .05$) are significant. This is in accordance with the definitions of these behaviors--one cannot participate appropriately and aggress at the same time.

Other correlations of interest in Table 3 may suggest a pattern of emotional behavior--thus destruction is positively correlated with aggression and with crying. It might also be noted that crying is positively associated

Table 3

Within Cells Correlations of Child Behaviors

Variable	Ignore	Destruc	Agg	Cry	Prox	Sol	Part
Ignore							
Destruction	.06						
Aggression	.02	.41*					
Crying	-.10	.31*	.04				
Proximity	-.12	.04	-.04	.30*			
Solicitation	-.06	-.04	.18	-.07	.36*		
Participation	-.18	-.56*	-.28	-.68*	-.22		-.04

*$p < .05$

with proximity, and proximity with solicitation. The relationship between proximity and solicitation is an obvious one--that is, it occurs as a result of the child's approaching the teacher or vice versa. The definition of solicitation included a physical approach to the teacher by the child. By being close to the teacher, the child would also be in proximity to the teacher thus supporting the positive relationship between proximity and solicitation.

In the MANOVA, there were three effects: school, sex, and the interaction of these two factors. The MANOVA program presented the interaction first. This order will be presented here since the presence of interaction means that the main effects must be interpreted in the light of the interaction effect: school by sex. Table 4 presents the school

by sex interaction, and the means of the school by sex cells.

Table 4

Test of School by Sex

Variable	Univariate *F*	*p* less than	Discriminant function
Ignoring	6.0	.018	.735
Destruction	2.5	ns	-.655
Aggression	2.0	ns	.635
Crying	.2	ns	.672
Proximity	.09	ns	-.105
Solicitation	.5	ns	.165
Participation	.007	ns	.396

Multivariate *F* = 2.30, *p* <.042

Means of School by Sex Cells

	Factor	Ignore	Destruc	Agg	Cry	Prox	Sol	Part
S	X							
1	Male	.624	.123	.387	.216	2.35	1.05	6.62
1	Female	.266	.102	.225	.277	2.47	.95	6.81
2	Male	.289	.199	.261	.395	2.13	1.16	6.63
2	Female	.247	.057	.278	.546	2.13	1.20	6.84

School 1 = A & T Child Development Laboratory

School 2 = UNC-G Demonstration Nursery

The multivariate F is significant ($p < .042$) indicating that given the seven variables an interaction exists which cannot be judged to be due to chance. Inspection of the univariate F's shows the only clearly significant variable to be ignoring ($p < .018$). The means in the table clearly indicate the source of the interaction: the males in school 1 show almost three times as much ignoring as the other three groups. The means of the other three groups are approximately equal. No other univariate F's have associated p values less than the .10 level of confidence. Any further effects found with ignoring must be viewed with caution in light of this significant interaction. Even though not significant, a univariate inspection of means showed these boys aggressed more than any other group. They do not clearly show this on destruction.

Main Effect: Sex

Table 5 shows the overall or multivariate F, the univariate F's, the means, and the discriminant function weights for each variable related to the sex effect.

The multivariate F for the sex effect was suggestive ($p < .07$), but not significant. It must be concluded that even though some univariate F's are significant they must be rejected as other than chance variations among the seven variables. Since the overall F approached significance, it is of interest to note the significant univariate F's as meriting possible verification in future studies. The

variables of ignoring ($p < .003$) and destruction ($p < .041$) were both significant in the univariate analysis. On destruction, both groups of boys had higher mean scores than did the girls. On ignoring, the boys also had higher mean scores than the girls, but it was stated earlier that this was due to the interaction effect of boys at one school.

Table 5

Effect of Sex on Behaviors

Variable	Univariate *F*	*p* less than	Discriminant function
Ignoring	9.6	.003	.673
Destruction	4.4	.041	.545
Aggression	1.2	ns	.002
Crying	1.3	ns	-.518
Proximity	.11	ns	.067
Solicitation	.08	ns	.068
Participation	1.1	ns	-.167

Multivariate $F = 2.02$, $p < .073$

Means for the Effect of Sex

Factor	Ignore	Destruc	Agg	Cry	Prox	Sol	Part
Males	.456	.161	.324	.306	2.2	1.1	6.6
Females	.256	.080	.252	.412	2.3	1.1	6.8

Main Effect: School

Table 6 shows the multivariate F, the univariate F's, the means, and the discriminant function weights for each variable related to the effect of school.

Table 6

Effect of School on Behaviors

Variable	Univariate F	p less than	Discriminant function
Ignoring	4.0	.049	.270
Destruction	.6	ns	-.376
Aggression	.2	ns	.270
Crying	4.2	.046	-.939
Proximity	2.2	ns	.765
Solicitation	2.3	ns	-.708
Participation	.002	ns	-.573

Multivariate F = 3.25, $p < .007$

Means for the Effect of School

Factor	Ignore	Destruc	Agg	Cry	Prox	Sol	Part
School 1	.445	.112	.306	.246	2.41	1.01	6.72
School 2	.268	.128	.270	.470	2.13	1.18	6.74

The multivariate F was highly significant at $p < .007$. The significant univariate F's were ignoring ($p < .049$) and crying ($p < .046$). The significance of ignoring was

primarily due to the interaction effect since the males in School 1 ignored almost three times as much as the other three groups. The significance of crying appears to be the one true difference between schools as School 2 cried almost twice as much as School 1.

Analysis of Teacher Response

MANOVA was not appropriate for analysis of teacher responses. There were multiple types of behaviors for any teacher responding to various children's behaviors, but there were only eight teachers, in all, with two measures per teacher for any behavior (response rate to boys and to girls); therefore, the numbers were not adequate for MANOVA.

The method of analysis employed was an analysis of variance (ANOVA) for matched pairs, an analysis being done for each teacher behavior in response to a class of child behaviors. The matched scores constituted rates of response to boys and to girls. Prior to the analysis the sets of scores were inspected and it was found that many of the teachers did not indulge in some of the behaviors at all. Where behavior was rarely indulged in it was not only of little meaning, but the distribution of scores would make it inappropriate for a statistical analysis. Accordingly, the distributions were inspected prior to analysis and only those behaviors shown by at least five of the eight teachers were analyzed.

Responses to Disruptive Behavior

Disruptive behaviors are aggression, destruction, and ignoring. Of the thirteen possible responses, six were not analyzed because of infrequency of teacher response. These were brief conversation, extended conversation, praise, touching, hugging, and helping. It is not surprising that teachers do not respond in these ways to disruptive behaviors because these responses would be considered reinforcing responses to undesirable behaviors.

The original plan was to consider all disruptive behaviors combined. Since no statistically meaningfully results were obtained in these analyses, further explanation of data was attempted. It was believed that ignoring might be different from destruction and aggression in its effect on teachers. To assess this effect, rates were figured separately for ignoring and for destruction and aggression combined. Teacher responses to these behaviors were then analyzed. Of twenty-two analyses run, only one was significant. This showed that teachers responded to destructive and aggressive behaviors with no response more often for boys than for girls. Seven of eight teachers gave higher rates of no response for the boys. The means of .116 for boys and .055 for girls were significantly different with an F of 19.3 and $p < .01$. This result is certainly suggestive but being obtained as the only significant finding in a large number of after the fact analyses it is not acceptable as meaningful without replications in future studies.

Brief conversation was the only behavior of those not analyzed which showed a suggestive frequency of response. Interestingly, four teachers showed this response to boys and not to girls, but the average rate of this response was only .012 for the boys and .002 for the girls. In extended conversation, four teachers responded, three of whom responded only to boys, though the means were smaller than those cited above. The above data suggest that teachers do respond more often to disruptive behavior by boys with conversation but this response in general is so infrequent as to be relatively meaningless as a practical conclusion. As might be expected all punishing responses in response to disruption had frequencies large enough to be analyzed. Table 7 shows the mean teacher responses to children's disruptive behaviors which were analyzed and the resulting F tests of significance.

Inspection of the means indicates that a soft reprimand was favored by the teachers as a response to disruptive behavior. Inspection also suggests that the teachers not only favor soft reprimands, but also give rather large rates of no response to disruption. Next in terms of size of weights are brief direction and loud reprimand. The primary interest of the study, however, was the differential treatment of boys and girls. None of the F's approach significance. There is no evidence that teachers respond differently in their responses to disruptive behaviors by boys and girls.

Table 7

Teachers' Mean Responses to Disruptive Behaviors

Teacher Response	Boys	Girls	F*	p
Soft Reprimand	.309	.287	1.00	ns
Loud Reprimand	.104	.124	1.00	ns
Restraint	.050	.056	1.00	ns
Brief Direction	.155	.194	1.90	ns
Extended Direction	.051	.048	1.00	ns
Taking Away	.0008	.0009	1.00	ns
No response	.240	.151	2.29	ns

*In all analyses degrees of freedom for F are 1 and 7

Responses To Dependent Behavior

Dependent behaviors are solicitation, proximity, and crying. Of the thirteen possible responses, two were not analyzed because of infrequency of teacher response. These were taking away and loud reprimand. Table 8 shows the mean teacher responses to children's dependent behaviors which were analyzed and the resulting F tests of significance. Of the nine rewarding responses tested, two were significant, these being touching and brief direction, which were both higher for boys. The differences in means were not great but for seven of eight teachers the brief direction response was greater to boys than to girls and this was true for six of eight in the case of touching.

Table 8

Teachers' Mean Responses to Dependent Behavior

Teacher Response	Boys	Girls	F	p
Soft Reprimand	.024	.009	4.0	<1.0 >.05
Restraint	.004	.002	1.00	ns
Brief Conversation	.250	.222	2.07	ns
Extended Conversation	.127	.107	1.00	ns
Praise	.027	.025	1.00	ns
Helping	.183	.171	1.00	ns
Brief Direction	.077	.052	8.66	<05
Extended Direction	.047	.018	2.50	ns
Touching	.167	.149	6.00	<.05
Hugging	.012	.018	1.00	ns
No Response	.219	.203	1.00	ns

It might be of interest to note that all behaviors analyzed in response to dependency, in addition, to the two rewarding responses which were significant, and the punishment response which is suggestive, are higher for boys except hugging. Thus there is an interesting suggestion for further research that teachers tend to respond more often to all types of dependent behaviors from boys and significantly so with certain rewarding responses.

For punishment of dependent behaviors,loud reprimand occurred too infrequently to be analyzed. Restraint was more frequent but showed an extremely low rate of occurrence. The rates for soft reprimand were rather low but seven of eight teachers did show some response and the F was suggestive though not significant ($.05 < p < .10$), with teachers responding with higher rates to boys. This result might merit further research, particularly in view of the small n's involved, and the resulting lack of power in the statistical tests; but certainly it cannot be accepted as a fact from this study alone.

Responses to Participatory Behavior

Of the thirteen possible responses, seven were not analyzed because of infrequency of teacher response. These were soft reprimand, loud reprimand, extended conversation, extended direction, hugging, taking away, and restraint. Table 9 shows the mean teacher responses to children's participatory behaviors which were analyzed and the resulting F tests of significance.

Of the six responses tested, none of the F's were significant, which means that there was no difference in how teachers responded to the participatory behavior of boys and girls. The most frequent response to participatory behavior was that of no response--that is teachers neither rewarded or punished a child for his appropriate participation. The other responses which were analyzed occurred

at an extremely low rate and account for less than three per cent of teacher response to participatory behavior.

Table 9

Teachers' Mean Responses to Participatory Behavior

Teacher Response	Boys	Girls	F	p
Brief Conversation	.043	.030	1.00	ns
Praise	.003	.006	1.00	ns
Helping	.001	.005	1.00	ns
Brief Direction	.017	.021	1.00	ns
Touching	.014	.006	3.00	ns
No response	.959	.961	1.00	ns

Discussion

Hypothesis I stated that there would be no difference between the frequency of disruptive, dependent, and participatory behaviors of children at the two schools. A multivariate analysis of variance used to test hypothesis I revealed that there was a significant difference between the two schools ($p < .007$). The significant univariates were ignoring and crying. The significance of ignoring was primarily due to the interaction effect of sex by school. The difference in crying appears to be the one true difference between the schools.

This difference may be related to the teacher-child ratio as the mean ratio in a classroom at UNC-G was 6.8 to 1 whereas at A & T State University the ratio was 12 to 1. Another possible cause for the difference is race, however it is not known how this would influence the crying behavior of children. The difference does not appear to be related to any known difference between the population as related to socio-economic status. The population was generally middle class with some professional and some lower income groups represented. Presumably some combination of class size, race, and other unknown factors have combined to produce this difference.

Through inspection of the data it was found that the two schools were not matched for the ages of the children, thus the second hypothesis which stated that younger children were expected to exhibit more dependent behaviors than older children could not be thoroughly tested. However, through a regression analysis it was found that two behaviors, crying ($p < .001$) and participation ($p < .01$), were significantly related to age. Crying was one behavior in the dependent group, the others being solicitation and proximity. As seen in Table 2 (p. 34), the results showed that younger children cried more than older children. Of the three dependent behaviors observed, crying was the only one which was significantly related to younger children. Therefore, the results partially support the hypothesis which stated that

younger children were expected to exhibit more dependent behaviors than older children.

The existence of a significantly larger amount of crying among younger children can be attributed to a general trend in emotional development; that is emotional responses become more specific with increasing age (Freedman, 1967). The older child is able to develop more acceptable alternatives to a problem whereas the younger infant and toddler usually cry. Another aspect to consider is that "as children grow older, the culture demands greater suppression of overt emotionality, and accordingly, they gradually learn increased emotional control" (Ausubel, p. 421). This is illustrated by the gradual decline of crying as a form of emotional expression.

Ausubel (1970) referred to the distinction between the development of executive dependence and volitional dependence in the child as the "manipulative activity involved in completing a need-satisfaction sequence, whereas volitional refers solely to the act of willing the satisfaction of a given need apart from any consideration as to how this is to be consummated" (p. 252). Volitional dependence is characteristic of the infant who is unable to physically satisfy his needs of his own free will; as the child grows older he becomes more competent and begins to develop executive dependence whereby he can manipulate the environment to satisfy his needs. Thus the existence of a greater

amount of dependency behaviors among the younger children can be attributed to their normal development and the presence of a greater amount of volitional dependence and a less developed sense of executive dependence than the older children.

The third hypothesis stated that boys were expected to exhibit a greater frequency of disruptive behaviors than girls but that girls were expected to exhibit a greater frequency of dependent behaviors than boys. As seen in Table 5 (p. 38), the analysis indicated that the multivariate F for the sex effect was suggestive ($p < .07$), but not significant. The univariate F's for ignoring ($p < .003$) and destruction ($p < .041$) were significant but cannot be accepted as fact as the overall F was not significant. However, on the three variables of disruptive behavior (ignoring, destruction, and aggression), the mean scores for boys were greater than those for girls. The mean scores on the dependency behaviors (crying, proximity, and solicitation) for girls were .412, 2.3, and 1.1 respectively; whereas for boys the mean scores were .306, 2.2, and 1.1 respectively. Girls scores were higher than boys on dependent behaviors and boys were higher than girls on disruptive behaviors. Although the overall results were not significant, the multivariate F is certainly suggestive and may indicate the need for more research. Many prior studies have indicated support for the above stated hypothesis. Perhaps a larger

sample, or a greater time period would have been beneficial in obtaining those results.

The fourth hypothesis stated that teachers were expected to respond to disruptive behaviors of boys more than girls and to reinforce girls for dependent behaviors more often than boys. This hypothesis was tested by an analysis of variance for matched pairs; an analysis being done for each teacher behavior in response to a class of child behaviors. The results indicated that there was no significant difference in how teachers responded to the disruptive behaviors of boys and girls. Two of the teachers responses to dependent behaviors were significant, those being touching and brief direction, which were both higher for boys. In a similar study by Serbin, O'Leary, Kent, and Tonick (1973), it was found that teachers' reactions to solicitation by boys (one behavior of the dependency category) included more directional and instructional responses. However, Serbin, O'Leary, Kent, and Tonick (1973) noted that teachers gave more physical attention such as touching and helping to girls.

The non-significance of many of the results necessitated an examination of this procedure. It is possible that an increased number of sessions would have produced more significant results. Perhaps a change in the observational recording procedures would have produced more significant results. The procedure utilized in this experiment involved the observation of one child at a time. If the procedure was changed

so that the teacher was being observed at all times rather than the child, a better range of the teachers actual interactions with the children could be obtained.

CHAPTER V

SUMMARY

An observational investigation was made to study the teacher-child interaction patterns and their relation to sex differences. According to Serbin, O'Leary, Kent, and Tonick (1973) teachers respond differentially to the disruptive and dependent behaviors of children as a function of their sex. Findings from an earlier study by Biber, Miller, and Dyer (1972) indicated that teachers contacted girls for instructional purposes significantly more often than they contacted boys.

Professionals and paraprofessionals working with very young children need to know how their own behaviors can influence the sex role development of children. Further information dealing with the contingencies which exist in the preschool classroom may be helpful to child development specialists responsible for designing preschool curriculums.

A review of the literature indicated that there is a lack of information regarding the specific ways in which schools foster socialization into sex roles. How teachers respond to, teach, and encourage sex-typed behaviors is not clear.

The subjects were 57 children enrolled in preschool classes at the Demonstration Nursery of the University of

North Carolina at Greensboro and at the Child Development Laboratory of A & T State University. The children from all eight classrooms were categorized into two age groups: (a) 12 to 36 months and (b) 37 to 66 months.

The following hypotheses were tested: (a) teacher reaction to three classes of child behavior--disruptive, dependent, and participation--would be similar for both schools; (b) younger children would exhibit more dependent behaviors than older children; (c) boys would exhibit greater frequency of disruptive behaviors than would girls; (d) girls would exhibit a greater frequency of dependent behaviors than would boys; (e) teachers would respond to disruptive behaviors of boys more often than to girls; and (f) teachers would reinforce girls for dependent behaviors more often than for boys.

The researcher trained one graduate student to help her with recording child and teacher behavior through the use of an observational scheduel. The children observed were randomly selected from the class roll prior to the first day of data collection.

Each child was observed two times per day in observation periods of two minutes. The length of the observation period was three weeks.

The two observers recorded teacher-child interaction using a behavioral schedule. Disruptive behaviors observed were ignoring, destruction, and aggression. Dependent behaviors observed were crying, proximity, and solicitation. In addition, the behavior of a child appropriately participating in the ongoing class activity was recorded. Teacher responses to each specific child behavior were as follows: punishing behaviors included soft reprimand, loud reprimand, and restraint. Rewarding or accepting behaviors included praise, touching, hugging, brief conversation, extended conversation, brief direction, extended direction, helping, taking away, and no response.

The results were analyzed statistically by a multivariate analysis of variance and analysis of variance for matched pairs. In the inspection of data, it was found that the two schools were not matched for the ages of the children. To eliminate the influence of this difference, age was included in the analysis as a covariate.

The one finding for child behavior was that the behavior of ignoring was carried out significantly more by boys than by girls. However, the excess of ignoring behavior was the result of only the males in one school. When schools were compared, one school had signficantly more ignoring behavior (caused by its boys) and the other school had significantly more crying behavior. When boys and girls were compared, there was no significant difference among the seven behaviors.

The major findings for teacher responses were that there were no significant differences among the teacher responses to the children's disruptive behaviors. Teachers did, however, respond significantly more by touching and brief conversation for dependent behaviors of males.

The major conclusion was teachers do respond differentially to dependent behaviors of male children. This finding was unexpected and is not in the generally predicted direction.

Implications for Further Research

1. One research possibility is that of using younger children, preferably infants, who are in day care centers, to determine at what age teachers begin treating males and females differently. This would involve the revision of the observational schedule to include behaviors produced by infants which could be classified as disruptive and dependent.

2. Another research question is whether responses of teachers in affiliation with a university differ from teachers at private day care centers.

3. A comparison of male and female teachers' responses to child behavior is suggested by the fact that all teachers in the present study were female.

BIBLIOGRAPHY

Ausubel, D. P. & Sullivan, E. V. Theory and problems of child development. (2nd ed.) New York: Grune & Stratton, 1970.

Bandura, A., & Walters, R. H. Social learning and personality development. New York: Holt, Rinehart, and Winston, Inc., 1963.

Biber, H., Miller, L. B., & Dyer, J. L. Feminization in preschool. Developmental Psychology, 1972, 7, 86

Bronfenbrenner, U. Freudian theories of identification and their derivatives. Child Development, 1960, 31, 15-40.

Fagot, B. I., & Patterson, G. R. An in vivo analysis of reinforcement contingencies for sex-role behavior in the preschool child. Developmental Psychology, 1969, 1, 563-568.

Fauls, L. B., & Smith, W. D. Sex-role learning of five-year olds. Journal of Genetic Psychology, 1956, 89, 105-117.

Freedman, D. G., Loring, C. B., & Martin, R. N. Emotional behavior and personality development. In Y. Brackbill (Ed.), Infancy and early childhood: A handbook and guide to human development. New York: Free Press, 1967.

Goldberg, S., & Lewis, M. Play behavior in the year-old infant: Early sex differences. Child Development, 1969, 40, 21-31.

Goodenough, E. N. Interest in persons as an aspect of sex differences in the early years. Genetic Psychology Monographs, 1957, 55, 287-323.

Joffe, C. Sex role socialization and the nursery school: As the twig is bent. Journal of Marriage and Family, 1971, 33, 467-475.

Kohlberg, L. A cognitive-developmental analysis of children's sex-role concepts and attitudes. In E. E. Maccoby (Ed.), The development of sex differences. Stanford, Cal.: Stanford University Press, 1966.

Levitin, T. E., & Chananie, J. D. Responses of female primary school teachers to sex-typed behaviors in male and female children. Child Development, 1972, 43, 1309-1316.

Lewis, M. Parents and children: Sex-role development. School Review, 1972, 80, 229-240.

Lynn, D. B. Parental and sex role identification. Davis, Cal.: University of California Press, 1969.

Mischel, W. A social-learning view of sex differences in behavior. In E. E. Maccoby (Ed.), The development of sex differences. Stanford, Cal.: Stanford University Press, 1966.

Mowrer, O. H. Learning theory and personality dynamics. New York: Ronald Press, 1950.

Mussen, P. H. Early sex-role development. In D. A. Goslin (Ed.), Handbook of socialization theory and research. Chicago: Rand McNally and Co., 1969.

Parsons, T., & Bales, R. F. Family, socialization and interaction process. Glencoe, Ill.: The Free Press, 1955.

Rosenberg, B., & Sutton-Smith, B. Sex and identity. New York: Holt, Rinehart and Winston, 1972.

Rothbart, M. K., & Maccoby, E. E. Parents' differential reactions to sons and daughters. Journal of Personality and Social Psychology, 1966, 4, 237-243.

Sears, P. S., & Feldman, D. H. Teachers' interactions with boys and with girls. U. S. Cooperative Research Project No. OEC-6-10-078, U. S. Dept. of HEW, Wash., D. C., 1966. (ERIC No. ED 011 935).

Sears, R. S., Maccoby, E. E., & Levin, H. Patterns of child rearing. Evanston, Ill.: Row, Peterson and Co., 1957.

Serbin, L. A., O'Leary, K. D., Kent, R. N., & Tonick, I. J. A comparison of teacher response to the preacademic and problem behavior of girls and boys. Child Development, 1973, 44, 796-804.

Whitla, D. K. Handbook of measurement and assessment in behavioral sciences. Reading, Mass.: Addison-Wesley, 1968.

APPENDIX A

Brief Definition of Observational Code

Child Behaviors

Disruptive

1. IGNORING - child does not follow teacher's direction or direction to class within 10 seconds, or leaves area in which he is supposed to remain.

2. DESTRUCTION - throwing or otherwise damaging objects, except throwing an object at another person. Also spilling or making a mess.

3. AGGRESSION - physical aggression (hitting, biting, kicking, etc.) threats, name-calling.

Dependent

1. CRYING - facial movements or vocalization.

2. PROXIMITY - child is within arm's reach of teacher for entire twenty second interval.

3. SOLICITATION - vocal or physical solicitation of teacher attention.

Appropriate to Ongoing Activities

1. PARTICIPATION - when the child being observed is participating appropriately in one activity, he is scored as participating for that twenty second interval.

Adapted from Serbin, O'Leary, Kent, and Tonick (1973), used by permission of The Society for Research in Child Development

APPENDIX B

Teacher Behaviors

Punishing

1. SOFT REPRIMAND - verbal scolding or negative evaluation audible only to child and his neighbors.

2. LOUD REPRIMAND - as in soft reprimand, except that scolding is audible to entire class. May be in normal, somewhat loud or harsh tone.

3. RESTRAINT - physical contact restrains or forces orientation of child's head or body.

Rewarding or Accepting

1. PRAISE - verbal praise, compliments, or positive evaluation.

2. TOUCHING - positive physical contact, including patting head, holding hand, brushing hair, etc.

3. HUGGING - holding child to body except to restrain.

4. BRIEF CONVERSATION - teacher asks or answers questions without giving directions, or comments on work or other subject without making evaluation. Length must be one sentence or less.

5. EXTENDED CONVERSATION - as in brief conversation, except that it must be longer than one sentence.

6. BRIEF DIRECTION - verbal instruction to specific child.

7. EXTENDED DIRECTION - descriptive directions, telling child how to do something, or helping him to do something for himself. Also modeling a skill or activity for a child.

8. HELPING - doing something for the child, physical response to child's request for help, or offering physical assistance.

9. TAKING AWAY - physically removing child from group in nurturant fashion (e.g., when child cries).

10. NO RESPONSE - when child is engaging in activity and teacher does not react to the behavior during the twenty second interval.

Adapted from Serbin, O'Leary, Kent, and Tonick (1973), used by permission of The Society for Research in Child Development

APPENDIX C

OBSERVATIONAL RECORDING SHEET

OBSERVER _____ TEACHER _____CHILD _____ SCHOOL_____

DATE _____ ACTIVITY _____

Directions: Observers will use this sheet to record teacher and child behavior. The four rows represent the four 20 second observation periods within the 2 minute observation unit. The child behavior will be recorded under the appropriate behavior category. The teacher response to this behavior will be recorded in the same box with the appropriate abbreviation taken from the list below.

	IGNORE	DESTRUCT	AGGRESS	CRY	PROX	SOL	PART
1							
2							
3							
4							

S = soft reprimand
S* = loud reprimand
R = restraint
P = praise
T = touching
T* = hugging
C = brief conversation
C* = extended conversation

D = brief direction
D* = extended direction
H = helping
TA = taking away
NR = no response

* = A different intensity of a previously described behavior.